DEVELOPMENT OF A TASK ORIENTED PERFORMANCE STANDARD EVALUATION PROGRAM

EXECUTIVE DEVELOPMENT

BY: Robert Drake Idaho Falls Fire Department Idaho Falls, Idaho

An applied research project submitted to the National Fire Academy as part of the Executive Fire Officer Program

ABSTRACT

The purpose of this research project was to develop a program of evaluating the performance of all engine companies and individuals in standard evolutions, tasks, and department requirements. The problem was that the Idaho Falls Fire Department did not have a systematic program to evaluate personnel with regards to actual performance standards.

This researcher used action research to develop such a program. The following research questions were answered:

- 1. How can the Idaho Falls Fire Department evaluate the ability of individuals to perform necessary tasks at a level of acceptable fire service standards?
- 2. How can the Idaho Falls Fire Department evaluate the ability of engine companies to perform necessary tasks at a level of acceptable fire service standards?
- 3. What format would be effective in implementing a performance based evaluation system?
- 4. What method of documentation can be implemented to increase the effectiveness of a performance based evaluation system?

The initial procedure was to examine and clarify the problem statement. A literature review was conducted to examine the past experiences of other fire service agencies. The literature review was narrowed to concentrate on performance based evaluations. A situational analysis was conducted to determine causal factors and forces that would have either facilitated the project or impeded it.

A planning team was organized to review past efforts, current goals, and possible methods of achieving the goals. The current evolutions were compared to industry standards to assure effectiveness in the evaluation process.

The results of the research project included the development and implementation of a program to evaluate the preparedness of department members to effectively perform fire related tasks. The project identified methods of implementation and documentation.

This researcher recommended that all fire service agencies consider the implementation of a program that will both determine the competence of all members and effectively document their demonstrated competence.

TABLE OF CONTENTS

ABSTRACT	2
TABLE OF CONTENTS	4
INTRODUCTION	5
BACKGROUND AND SIGNIFICANCE	5
LITERATURE REVIEW	8
PROCEDURES	11
RESULTS	15
DISCUSSION	19
RECOMMENDATIONS	22
REFERENCES	24
APPENDIX A (Performance Standards)	26
APPENDIX B (Performance Based Evaluation Check Sheet)	29

INTRODUCTION

The Idaho Falls Fire Department places a high priority on training. An important part of our training program is the practice of engine company evolutions. Department members are expected to participate in these evolutions to maintain basic fire combat skills. The problem is that the Idaho Falls Fire Department does not have a systematic program to evaluate personnel with regards to engine company or individual task performance standards.

The purpose of this research project is to develop a program of evaluating the performance of all engine companies and individuals in standard evolutions, tasks, and department requirements.

Action research was used in an effort to develop such a program. The following research questions had to be answered:

- 1. How can the Idaho Falls Fire Department evaluate the ability of individuals to perform necessary tasks at a level of acceptable fire service standards?
- 2. How can the Idaho Falls Fire Department evaluate the ability of engine companies to perform necessary tasks at a level of acceptable fire service standards?
- 3. What format would be effective in implementing a performance based evaluation system?
- 4. What method of documentation can be implemented to increase the effectiveness of a performance based evaluation system?

BACKGROUND AND SIGNIFICANCE

The Idaho Falls Fire Department, hereafter referred to as the department, has historically attempted to introduce programs designed to confirm competency. In the early 1980s the department adopted what was then termed a physical agility test. All department members, on an annual basis, were required to perform a series of tasks designed to simulate actual fire combat tasks such as donning a self contained breathing apparatus, advancing a hose line, and climbing a ladder.

The annual test did manage to confirm a department member's baseline ability to perform fire related tasks, but the program had numerous shortcomings. The test was comprised of two sections, and firefighters were allowed 20 minutes to complete each section. The time allowed proved excessive, as the more motivated and competent firefighters could complete the tasks in around five minutes. Those department members less motivated and/or incompetent could complete the series of tasks, but they used all the allowed time. It was clear to most of the department's management that the leniency of the physical agility test rendered it a poor indicator of a firefighter's actual ability to perform in combat situations.

As the department's administration changed, an attempt was made to increase the test's validity by decreasing the time allowed. This posed no difficulty for the more motivated and competent firefighters, but the less motivated now complained of numerous injuries, so the physical agility test was abandoned.

In retrospect the most prominent weakness of the abandoned testing program was not the time factor, but the lack of any connection to a corresponding training program. The department's training officer emphasized engine company evolutions, but department

management made no attempt to mandate any performance level. The more motivated company officers devoted time to practicing the evolutions at the drill field, but the less motivated officers placed a much lower priority on practical training. Management's failure to mandate training or test for competency created a broad range of competency levels. The success of fire ground operations varied widely depending upon which crew arrived on the scene. The individual firefighters assigned to an unmotivated officer were not provided with the practical drill field experience to assure their effectiveness in an actual fire situation.

The department clearly had a need for a program that would encourage all companies and individuals to train and also allow for confirmation of the effectiveness of that training.

"A department that establishes performance standards or timed evolutions for engine and ladder companies and then trains utilizing those criteria will be better prepared to handle the varied problems that occur at an incident scene" (Smith, 1996, p. 16).

Besides the practical need for a performance standard program there is also the legal need. As the department moved towards computerized record keeping, it became obvious that not only was it important to demonstrate our capabilities, it was also important to be able to document that demonstration of appropriate training. Davis (1991) states that:

To ease the threat of lawsuit, the prudent fire manager will investigate and consider any sensible protection that might be available. This is especially true today, with the epidemic of lawsuits. It seems that every mishap can result in a legal action. (p. 56)

Davis goes on to add, "Also, the documentation that results from performance standards (often called 'paper trails') can provide valuable support when legal scrutiny occurs" (p.56).

The purpose of this research project, the development of a program to evaluate the performance of engine companies and individuals, relates to Unit 10: Service Quality/Marketing

of the *Executive Development* course taught at the National Fire Academy. While discussing service quality in that setting, Drucker (1999) claimed "it takes far more energy and work to improve from incompetence to mediocrity than it takes to improve from first rate performance to excellence" (p. 67). The successful implementation of a program that will encourage training and allow the department to evaluate our members' task performance should eliminate the incompetence and allow for future excellence.

LITERATURE REVIEW

Training is one of the most often discussed topics in the fire service. The appraisal and assessment of training has also received attention. Past generations of firefighters measured their proficiency under fire; turning a building into a parking lot earned that fire crew a failing grade. The trend towards a more proactive assessment of efficiency has given the concept of performance standards momentum.

Performance standards have been around for some time. In the 1970s and 1980s, there were many articles about them. Some have viewed performance standards as a passing fad, but many universities and other educational facilities have developed the concept of competency-based education, which is essentially performance standards in a new wrapper. This can be the best training to effectively maintain competency and optimum employee performance. (Davis, 1991, p. 56)

The first research question posed referred to the evaluation of an individual's ability to perform tasks. Performance standard evaluations originally focused on the engine company. As the concept has developed, proponents of performance standards have become aware of the need

to evaluate the individual within an assessed engine company. Lecuyer (1999) warns "be aware that an individual could score poorly even if the company met the time standard, so do not overlook the individual ratings" (p. 94). The results of focusing only on company success could cause an individual's deficiencies to be overlooked. That individual might be compensated for when operating on the assigned crew, but if reassigned to another crew those deficiencies could prove problematic. Warren (1998) addresses the individual assessment:

The evaluation phase signals the end of the learning process and verifies that the original learning objectives have been attained. The only way to adequately implement this phase is for the company officer to test the student's ability to perform a task without assistance. Evaluations can be accomplished through . . . performance exams for psychomotor objectives. (p.52)

Evaluating the task performance of an individual working within a company operation requires a standardized program. "Standardization lets members assigned to different units work together" (Smith, 1996, p. 16). The assessment of individuals also calls for special attention on the part of the assessors. "The evaluation process requires multiple graders so that at least two (preferably three) raters grade each individual" (Lecuyer, 1999, p. 92).

The second research question referred to the evaluation of the engine company's ability to perform task oriented evolutions. "As chief, one of your responsibilities should be to empower and encourage your company officers to verify that all training goals have been met. Otherwise, the effectiveness of your training program is merely a guessing game" (Warren, 1998, p. 52).

One of the most common methods of evaluating an engine company's performance is to establish a company standard that can be demonstrated by a performed evolution. "A company

standard is a minimum task performance requirement that a company working as a team must meet" (Lecuyer, 1999, p. 89). If performed and based on a consistent set of guidelines, evolutions offer both training and the verification of capability:

The entire evolution must be specific and documented. There should be a maximum amount of time to complete an evolution. Using time frames simulates the stress found at the incident scene. It also demands teamwork on the part of all members to assure that the time frames will be met. (Smith, 1996, p. 16)

Engine company evolutions are the bare minimum of fire company training, and those same evolutions can be used to verify proficiency. "Although these evolutions and skills require some practice, after time they become second nature" (Ridley, 1999, p. 21).

The third research question asks what format might be used for implementation of a performance based evaluation system. Research indicates a strong inclination toward the use of standard operating procedures or standard operating guidelines. "In the fire service, written standards, and standard operating procedures and standard operating guidelines, are the norm. These standards define or describe accepted practices" (Rukavina, 1998, p. 28).

The basic purpose of the implementation of a program to evaluate task oriented performance is to achieve an acceptable level of overall performance. To reach the desired level of consistency, the department needs to document the program and adopt that program as part of the department's administrative guidelines. "Rules and procedures are a vital part of control and are an essential component of the management process. In any organization, control is necessary to minimize risk and ensure predictable outcomes during standard operations" (Cook, 1999, p. 108).

In the unfortunate event of a fire ground injury or death, the department needs to have

the ability to verify consistent and competent operations. The standard operating procedure or standard operating guideline format would allow for that verification. "If a fire department has its own rules, regulations, or standard operating procedures, they are what a court would examine to find evidence of a standard or behavior or care" (Bachtler & Brennan, 1995, p. 168).

The fourth and final research question asks what method of documentation could be used to increase the effectiveness of a performance based evaluation system. Research reveals that this documentation could be part and parcel with the chosen format. If the program is implemented in a standard operating procedure or standard operating guideline format, the documentation of the program will exist as part of the department's administrative guidelines. The determination of how to document the actual performance of the exercise should be part of the procedure or guideline.

A performance evaluation program should promote training, determine the effectiveness of that training, and document the department's capability to perform fire combat tasks at an acceptable standard. This documentation should establish both the competence of all department companies and the ability of all individuals.

As a public safety organization the department has an obligation to demonstrate competence. Unfortunately, that competence might have to be verified in a post-incident setting, as previously discussed. Effective documentation of both the adopted standard and the demonstrated performance is essential. "Standards are a valuable tool for organizational advancement, but adopting a standard leaves deep footprints. Make sure that your department is fully aware of a standard's requirements, and build training on those requirements into your department's continuing-education program" (Rukavina, 1998, p. 30).

PROCEDURES

Definition of Terms

Engine Company Evolutions. "Methods performed by company members to complete multiple jobs and/or tasks to implement fire ground operations" (Ridley, 1999, p. 21). An assortment of evolutions should be implemented to practice and demonstrate proficiency in all necessary fire combat skills.

Skills. "Methods performed by a company to complete a job and/or task to implement fire ground operations. Each skill is typically one part of an overall evolution" (Ridley, 1999, p. 21).

Standard Operating Procedures. Standard operating procedures are a set of organization directives that establish a standard course of action in both emergency operations and in routine operations. The standardization of operations is designed to increase fire department efficiency.

Standard Operating Guidelines. Standard operating guidelines are much the same as standard operating procedures, but generally guidelines are used in a less restrictive fashion. Procedures imply a way things must be done, and guidelines imply a way things should be done. It is felt in the fire service that guidelines allow more latitude to the officer in charge.

The first step in the research process was to examine the basic problem statement. Was the problem statement clear, and was it comprehensive enough to fully describe the situation? Reviewing the background of the situation and the desired outcome made it possible to efficiently state the problem: The Idaho Falls Fire Department does not have a systematic program to evaluate personnel with regards to engine company or individual task performance standards. Action research was employed to develop and implement such a program.

The next procedural step involved establishing a goal. This goal is clearly defined in the

purpose statement: to develop a program of evaluating the performance of all engine companies and individuals in standard evolutions, tasks, and department requirements.

A literature review was conducted to examine the past experiences of other fire service representatives. The problem of evaluating performance has long been a matter of interest in the fire service. Many articles were available, but a great number of them involved the basic employee evaluation process. The literature reviewed had to concentrate on task oriented performance evaluation. Fortunately there is sufficient documentation of this specific situation to allow for appropriate study.

A situational analysis was conducted to determine causal factors. The examination of the department's failed attempts to establish a performance based evaluation program illustrated several unsuccessful strategies. The literature review gave examples of successfully implemented programs. By comparing the department's past failures and the documented successes, the various factors contributing to the problem could be identified.

Existing situational forces that could be used to successfully reach the goal were examined. The primary existing force was the department's commitment to establishing, demonstrating, and documenting performance competence. The management of the department, as a group, all recognized the need for developing an effective program. An important procedural step was the involvement of the department's officers in reaching the goal. A planning team was formed that included division chiefs and senior captains. Wallace (1998) makes frequent reference to the use of "planning teams" in a fire department's strategic planning. "The planning team should first hold a discussion session to identify the goal of this step" (Wallace, 1998, p. 115).

The planning team used the department's past failures and the successes described in the

literature review to clarify the goal. The planning team determined that the existing department evolutions could be used to effectively evaluate both individual and engine company performance. The planning team examined the evolutions to assure compliance with fire service standards. National Fire Protection Association (NFPA) standards were originally used to develop the evolutions, and so the most current standard was reviewed to assure consistency (NFPA 1001, 1997). Basic fire ground operations were reviewed to confirm that the evolutions included all pertinent tasks and skills. The International Fire Service Training Association (IFSTA, 1998) was consulted to confirm that all essential tasks were performed in the company evolutions. By matching the skills evaluated in the evolutions with the goal of the project the planning team was able to fine tune the evolutions to meet the needs of the department.

The third and fourth research questions required additional procedural steps. These questions included the determination of a format for effective implementation and a method of documentation that could increase the effectiveness of a performance based evaluation system. Answering these questions required the expertise of the department's division chief responsible for computer operations and records. This individual was part of the planning team and was familiar with the project goal. His expertise in writing standard operating guidelines and in documenting training records was invaluable in reaching the goal.

In addition to identifying and utilizing positive situational forces, impeding forces had to be identified and minimized. The primary situational force that was identified as a potential impediment was the natural reluctance of employees to be tested. "Few people like to be tested, because testing can show others our individual weaknesses in knowledge and physical abilities" (Warren, 1998, p. 52). To eliminate this force, or at least minimize the impediment, the program was aggressively detailed to the department's members as it was being developed. The company

officers were briefed in officers' meetings about the future implementation of such a program, and these briefings included detailed explanations of why such a program was considered necessary. The support of the company officers was important to the successful implementation of the program.

Objectives were clearly defined and action plans established to reach the objectives. A program was designed to evaluate skill and task performance, based on the updated evolutions. A format was developed to implement the program, and a method of documentation was introduced.

The only noted limitation was the requirement that the program be actively employed after implementation to allow an opportunity to correct any deficiencies. This is a minor limitation, and one that would exist in the implementation of any new operational program. The evaluation of the program and subsequent improvement are necessary to the success of the program.

RESULTS

The final products of the research can be found in Appendix A (Performance Standards) and Appendix B (Performance Based Evaluation Check Sheet).

Answers to Research Questions

Research Question 1. Research determined that the evaluation of an individual's ability to perform necessary tasks should be coordinated with training activities that emphasize the practical application of those tasks. "Firefighters who have mastered the basic equipment carried today are not only proficient in the routine daily emergencies they face but can also extrapolate this knowledge readily and better handle large-scale or disaster-like incidents" (Bachtler &

Brennan, 1995, p. 341).

The result of the literature review was a clear indication that if the department trains with evolutions that are consistent with fire service standards, the department can then demonstrate an individual's competence by performing those same evolutions in a controlled and evaluated setting. The series of evolutions in use by the department was compared with fire service standards as detailed in NFPA 1001 (1997). The department's training evolutions were also validated by IFSTA (1998) guidelines. These sources clearly define an acceptable level of fire service standards, and their comparative review facilitated the refinement of the department's set of evolutions. The existing set of evolutions that were in use as a training tool could be used as task performance standards.

Research Question 2. The result of the literature review was the conclusion that engine companies could be evaluated for performance capability in the same fashion as an individual would be assessed. Having determined that the evolutions used in training included all pertinent tasks, and that the evolutions met fire service standards, those existing evolutions were applied as an evaluation tool. Engine companies continued to train with the existing evolutions, and a program was developed to use those same evolutions to determine competence.

The initial application of the department's evolutions in an assessment scenario produced some unexpected findings. The program was designed to evaluate individuals and engine companies simultaneously. The assessors evaluated the entire company on the completion of the evolution in a predetermined time, and at the same time evaluated the individual's ability to perform assigned tasks. The unexpected finding was that the engine company seldom failed, despite unacceptable performance by an individual on that company.

The initial application of the program involved established engine companies. It was

apparent that unacceptable skill performance by an individual could be compensated for by the balance of the company. The assessors therefore retested the failed individual with another company. The desired result of such a program would be that the department could determine the proficiency of individuals and companies under any possible circumstance. The reassignment to another company is a common circumstance, and therefore the individual must be capable of acceptable task performance in this situation.

The determination of a deficiency on the part of an individual seldom caused the company to fail. Once the training deficiency was noted remedial efforts were applied, and the result was the successful completion of the performance evaluation by all members.

Research Question 3. The department operates under a set of standard operating guidelines, so it was determined that such a program would be most effectively implemented under that format. The literature review supported the use of standard operating guidelines or procedures for important operational direction. This researcher drafted a standard operating guideline that detailed the performance evaluation program. The guideline followed a format consistent with the existing standard operating guidelines.

The planning team was given the assignment of reviewing the drafted standard operating guideline. Cook (1999) reinforced the concept of a group developing procedures:

Committees are often useful in the development of rules and procedures because the process involves the end-users of the product. A group will typically have more collective knowledge and experience than a single individual, although it is entirely appropriate for an individual to develop the initial draft of a rule or procedure. (p. 112)

The result was the department's adoption of a standard operating guideline that detailed the use of our training evolutions as a tool to evaluate company and individual competence (see Appendix A). The administrative guideline was written in multiple sections.

The first section describes the purpose of performance standards. The performance standards are described as a method of measuring ability and determining fire fighting strength prior to an actual incident. The various sources are briefly outlined in this section, as are the responsibilities of the company officers and the division chiefs.

The next section of the guideline describes in more detail the application of the performance standards. This description includes details as to how the evolutions will be timed and how the evolutions will be judged. Also discussed is the documentation of the event. An important element of this section is the responsibility given to the company officer for the deficiency of the individual on that particular company.

The last section of the guideline describes the various performance errors. Performance errors are defined as the failure to properly complete an operation, therefore substantially affecting the successful outcome of the evolution. A detailed list of potential performance errors is provided at the end of this section.

Research Question 4. Having adopted a standard operating guideline that details a program of performance standards, the final step was to implement a method of documentation to assure the effectiveness of the program. A system of evaluating performance standards required not just a method of determining competence but also a method of documenting that determination.

This researcher determined that the method of documentation should be a check sheet type form that would include any information that might be necessary for the future demonstration of the department's capability. The result was a form that allows for the documentation as needed (see Appendix B).

The form allows for the documentation of basic logistical information such as the date, the platoon, the location of the drill, and the type of apparatus. The form also calls for specific information such as the names of crew members and the evolutions used in the evaluation. In the case of unacceptable performance, space is allowed for the action required, a retest date, and the identification of the evaluating officer. This form was also adopted as an administrative guideline.

DISCUSSION

"Because employees are the most valuable asset of an organization, managers need a valid, reliable, and representative evaluation that encourages employee motivation and performance" (Deml, 1995, p. 14). Of all the resources necessary to the successful operation of a fire service organization, the personnel are certainly the most important. Maintaining a maximum performance level requires a well designed training program and a method of evaluating the effectiveness of that training.

It is important that training includes repetitive performance of all the specific tasks and skills that may be required in an actual emergency incident. This repetition will make the emergency performance of these skills and tasks second nature and allow the fire service manager an accurate appraisal of the personnel resources available. "Routine operations training includes the hose, ladder, and practice evolutions that are necessary in day-to-day fire department operations. It includes practice with both new and standard equipment" (Bachtler & Brennan, 1995, p. 341).

There are a variety of evaluation methods, but fire service managers agree that some form of personnel evaluation is imperative. "While managers differ in their findings concerning

the effect of performance appraisal programs, they do agree that an effective performance evaluation program can improve employee performance and enhance communication between managers and employees" (Deml, 1995, p. 14). Performance evaluation is important in assessing the organization's ability to effectively mitigate emergencies. Sorenson (1998) states:

The two primary objectives of a well functioning performance appraisal system should be: (1) to formally measure the performance of the individual employee, and (2) provide information on how well the system is designed and working. The formal measures of performance are used as feedback to the employee and used by others in management for making personnel decisions such as promotions and work assignments. (p. 9)

One of the more effective and widely used methods of evaluating performance capabilities is the use of engine company evolutions to both train and evaluate performance.

Davis (1991) summarizes the effectiveness of such a program:

Fire departments that have been using a training program with performance standards have reported satisfactory results. Several departments have tied it into their personnel evaluations. This can be valuable, since the evaluations are compiled with measurable training results, rather than subjective opinions. Measurability leads to a more legally defensible system. (p. 56)

Researching the successful use of training evolutions to evaluate performance capabilities clearly indicated that the Idaho Falls Fire Department could implement a performance based evaluation system. Comparing the department's current evolutions to fire service standards maximized the validity of the program. It was also important to review the set of training evolutions to confirm that the personnel would be evaluated on all necessary skills and tasks.

Warren (1998) stated the following:

Most fire service training topics are the result of a job analysis, which means that the topic supports a skill needed to perform a specific job. When choosing your department's

training topics, the training division (or other responsible office) should compare the needs of the department with the tasks required to meet those needs. (p. 50)

Research indicated that successful implementation of such a program should include definitive explanation in a format that would encourage compliance. The resulting standard operating guideline (Appendix A) adequately details the expectations and implementation of this performance evaluation system. The guideline is consistent with successful programs reviewed in the research. Lecuyer (1999) describes a successful procedure:

A company is assigned an evolution and given the time standard for completion. The time clock starts as soon as the evolution begins and the raters observe both individual group performance for proper procedures and the overall operational smoothness.

Individual raters are assigned one or two members to observe specifically. (p. 94)

The results of the evaluation exercise are recorded on the check sheet adopted as part of the department's operational guidelines (Appendix B). The implications of this demonstration of competence are important. The successful demonstration of competence validates the training program, and unsuccessful performance indicates the need for specific training. "The company performances are graded on a pass/fail system based on the time standard determined for each evolution. If the team does not meet the time standard, training is indicated" (Lecuyer, 1999, p. 94). The results of the initial application of this program were consistent with the research. Specific training deficiencies were identified, and individual deficiencies were also discovered. The corrective action taken should have a significantly positive effect on the operational success

of the department.

In addition to the identification of deficiencies, the implementation of the program allows the department's leaders to more effectively evaluate the human resource factor. This finding is also consistent with the research. Smith (1996) described this benefit:

In addition to the benefits gained by firefighters training on timed evolutions, a fire officer should make note of the amount of time required to perform these evolutions.

This can help the officer when commanding a fire scene in assigning tactical operations.

(p. 18)

RECOMMENDATIONS

The Idaho Falls Fire Department should continue to use the performance based evaluation system developed by this research project. The performance based evaluation program will alleviate the problem presented by the inability to adequately assess the capability of the department's companies and individuals. The regular assessment of each department member's

ability to perform necessary tasks and skills will allow the department a better assessment of the organization's potential effectiveness in an actual emergency.

The department should also continue to evaluate the program, as detailed in Appendix A. By re-evaluating the standard operational guideline the department should be able to identify any needed changes or improvements that might make the process more effective.

The department should also reevaluate, on a regular basis, the documentation form (Appendix B). Adequate documentation of the successful demonstration of the ability to complete essential skills and tasks is an important component of the program. The

documentation should reflect successful retesting of deficient members. Proper documentation should provide the department with a means of demonstrating a comprehensive and successful training program.

Every fire service organization should have a system in place to evaluate the capabilities of its members to perform essential skills and tasks. The program should be based on a comprehensive training program that emphasizes the repetitive practice of actual fire ground essentials, as identified by industry standards. The development and use of a series of engine company evolutions will provide a format for practicing the essential skills. The timed performance of these evolutions in a monitored setting should be used to demonstrate competence.

A fire service organization that uses a performance based evaluation program should also develop an adequate documentation system. The unfortunate trend towards what can be considered excessive litigation dictates the need to be able to not only demonstrate competence, but also document that demonstration. A properly developed performance based evaluation system will facilitate the training needed, demonstrate the effectiveness of that training, and document the capability that is essential to effective operations.

REFERENCES

Bachtler, J. R., & Brennan, T. F. (1995). *The fire chief's handbook* (5th ed.). Saddle Brook, NJ: Penwell Publishing.

Cook, J. L. (1999, August). Writing standard operating procedures and guidelines. *Fire Engineering*, 152 (8), 107-116.

Davis, J. E. (1991, August). A look at performance standards. Fire Chief, 35, 56-58.

Deml, D. (1995, August). Performance evaluations. *The Voice*, 24, 14-16.

Drucker, P. F. (1999, March-April). Managing oneself. *Harvard Business Review*, 65-74.

International Fire Service Training Association. (1998). *Essentials of fire fighting* (4th ed.). Stillwater, OK: Oklahoma State University.

Lecuyer, J. (1999, February). Company standards: an alternative to physical performance testing. *Fire Engineering*, *152* (2), 89-94.

National Fire Protection Association. (1997). *Standards for professional firefighter qualifications* (NFPA 1001). Quincy, MA: Author.

Ridley, M. (1999, July). Evolution/skills- standards. *Speaking of Fire*, 7, 21-23.

Rukavina, J. (1998, June). Standards: can't live with 'em, can't live without 'em. *Fire Chief, 42,* 26-29.

Smith, J. P. (1996, April). Benefits of training. Firehouse, 21, 16-18.

Sorenson, R. L. (1998). *Transition into performance appraisal/employee coaching:*Orlando moves to the future. (Learning Resource Center no. 28761). Emmitsburg, MD:

National Fire Academy.

Wallace, M. (1998). Fire department strategic planning: creating future excellence.

Saddle Brook, NJ: Penwell Publishing.

Warren, B. (1998, March). An officer and an instructor. Fire Chief, 42, 48-54.

Appendices Not Included. Please visit the Learning Resource Center on the Web at http://www.lrc.fema.gov/ to learn how to obtain this report in its entirety through Interlibrary Loan.